

Application No. 10/689,115  
Amendment Dated: April 27, 2005  
Reply to Office Action of March 8, 2005

Marked-up Version of Claim Amendment

Claims 1-2. cancelled.

Claim 3. (currently amended) A ~~[[The]]~~ slot antenna ~~of~~  
~~claim 1~~ mountable on the Hercules aircraft dorsal fin  
comprising:

- a) a lower plate;
- b) an upper plate adjacent to the lower plate;
- c) an antenna element; and
- d) a tuner operatively connected to the antenna  
element;

wherein, the tuner transmits radio frequency signals to the  
antenna element, wherein the antenna element and the lower  
plate produce a capacitor effect, wherein the antenna  
element is integrated within the upper plate, and, wherein  
the antenna element having a center prong, a first lower  
prong and a second lower prong, wherein the three prongs are  
substantially separated by a fiberglass plate.

Claim 4. (original)           The slot antenna of claim 3,  
wherein the center prong having a width dimension 'W1',  
wherein the width dimension 'W1' is between about 10 inches  
and about 6 inches.

Claim 5. (original)           The slot antenna of claim 4,  
wherein the width dimension 'W1' of the center prong is  
about 8.0 inches.

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Claim 6. (original)            The slot antenna of claim 5,  
wherein first lower prong and the second lower prong having  
a width dimension 'W2', wherein the width dimension 'W2' is  
between about 4 inches and about 2 inches.

Claim 7. (original)            The slot antenna of claim 6,  
wherein the width dimension 'W2' of the first lower prong  
and the second lower prong is about 3.0 inches.

Claim 8. (original)            The slot antenna of claim 7,  
wherein the center prong having a length dimension 'L1',  
wherein the length dimension 'L1' is between about 120  
inches and about 110 inches.

Claim 9. (original)            The slot antenna of claim 8,  
wherein the length dimension 'L1' of the center prong is  
about 116.5 inches.

Claim 10. (original)           The slot antenna of claim 9,  
wherein the center prong having an apex, wherein the apex  
and the lower plate are separated by a distance 'D1',  
wherein 'D1' is about 7.5 inches.

Claim 11. (original)           The slot antenna of claim 10,  
wherein the first lower prong and the second lower prong  
having a length dimension 'L2', wherein the length dimension  
'L2' is about 134.5 inches.

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Claim 12. (original) The slot antenna of claim 11, wherein the lower plate having a length 'L3', wherein the length 'L3' is about 134.5 inches.

Claim 13. (original) The slot antenna of claim 12, further having a Radio Frequency feed line with a length "L4", wherein the feed line operatively connects the tuners to the antenna element, wherein the length "L4" is about 5.5 inches.

Claim 14. (original) The slot antenna of claim 13, wherein the aircraft is one of the Lockheed Hercules Models 'A-H'.

Claim 15. (original) The slot antenna of claim 14, wherein the tuners are mounted within the interior of the aircraft fuselage.

Claim 16. (original) The slot antenna of claim 15, further comprising a tandem rack, wherein there are a plurality of tuners, wherein the plurality of tuners are mounted in the tandem rack, wherein the plurality of tuners are mounted front to back of each other, and wherein the tuners are both connected to the same feed line.

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Claim 17. (original) A slot antenna mountable on the Hercules aircraft dorsal fin and adjacent to the aircraft empennage comprising:

- a) a lower plate;
- b) an antenna element having a front-end and a back-end;  
and
- c) a tuner operatively connected to the front-end of the antenna element;

wherein the tuner transmits radio frequency signals to the antenna element, wherein the aircraft having an empennage, wherein the back-end being adjacent to and connectedly grounded to the empennage, wherein the antenna element and the lower plate are separated by air, thereby producing a capacitor effect, and whereby the radio frequency signals will tend to radiate towards the grounded back-end of the antenna element and into the empennage area.

Claim 18. (original) The slot antenna of claim 17, further having a Radio Frequency feed line with a length "L4", wherein the feed line operatively connects the tuners to the antenna element, wherein the length "L4" is about 5.5 inches.

Claim 19. (original) The slot antenna of claim 18, further comprising a tandem rack, wherein there are a plurality of tuners, wherein the plurality of tuners are mounted in the tandem rack, wherein the plurality of tuners are mounted front to back of each other, and wherein the tuners are both connected to the same feed line.

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Claim 20. (original)      The slot antenna of claim 19,  
wherein the lower plate having a length 'L3', wherein the  
length 'L3' is about 134.5 inches, thereby increasing the  
propagation distance of the radio frequency signal.